

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: LUMARK

Report Number: P197321

Luminaire Tested: **NAV-AF-05-D-UNV-T4FT-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197321
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24256)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-05-D-UNV-T4FT-8030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 80 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24731 lumens
Efficiency: N/A
Efficacy: 88.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B3 - U0 - G4

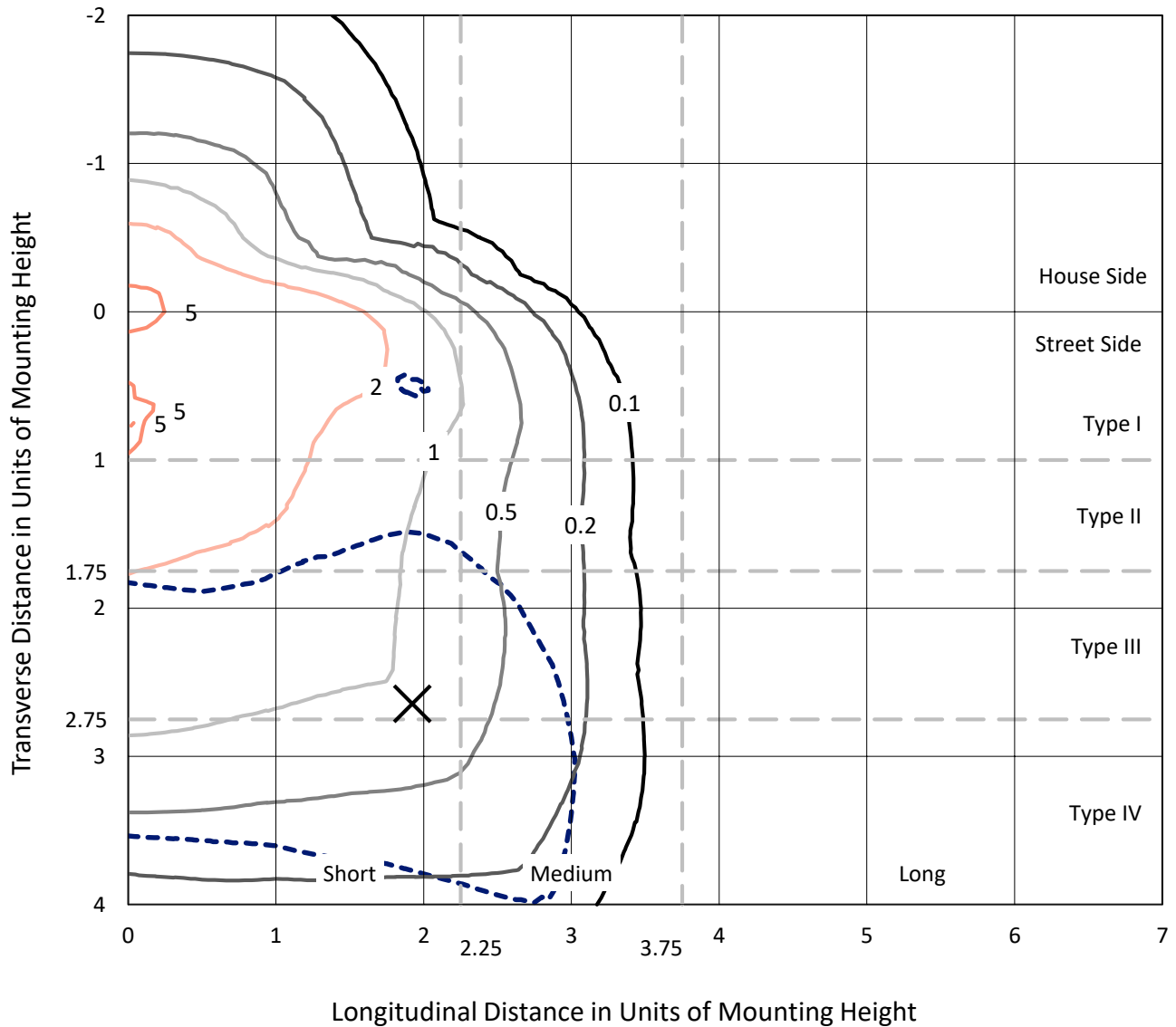
Input Watts (W): 279
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

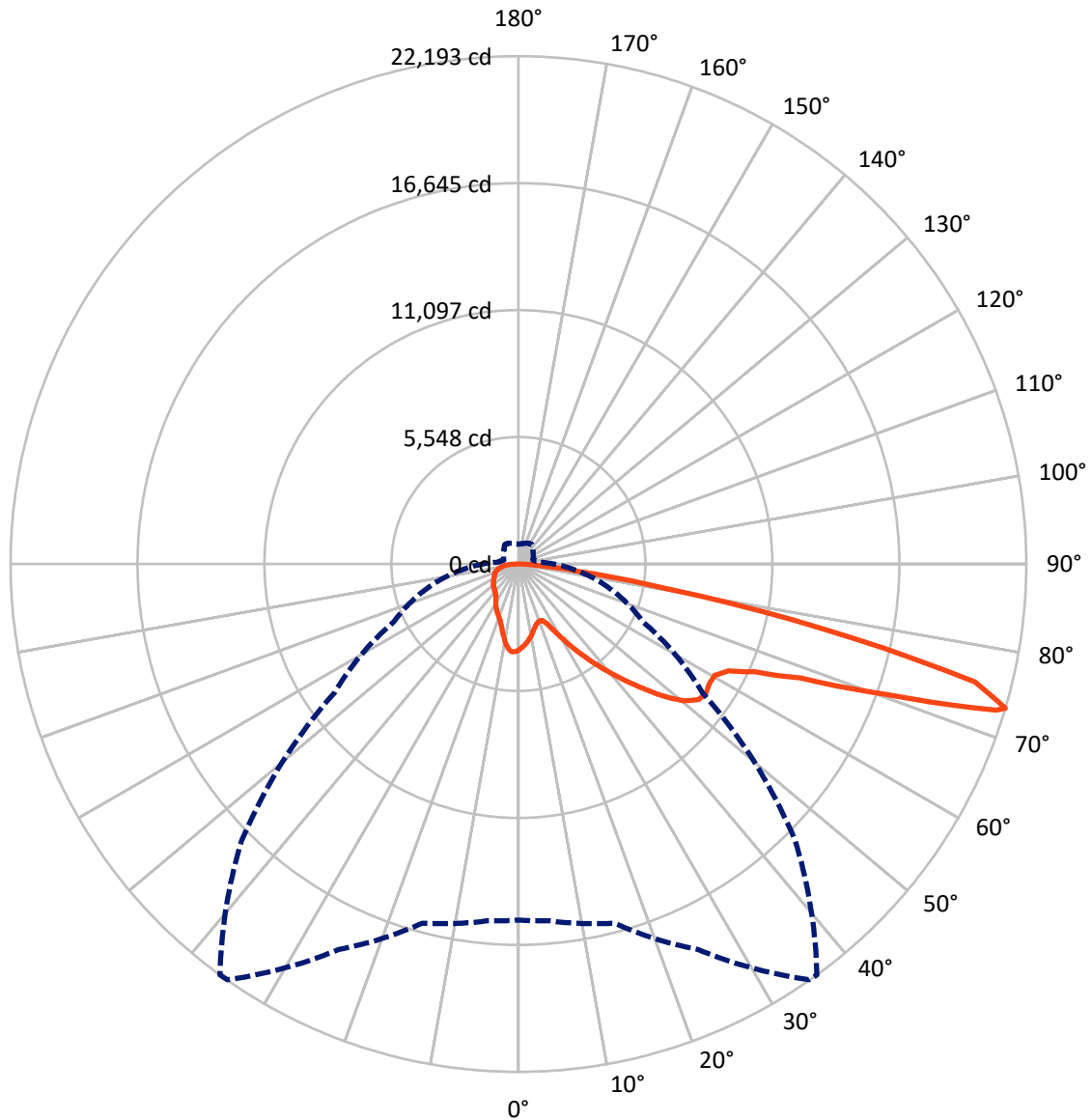
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral - - - Horizontal Cone Through 73-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4768.9	0.0	4768.9
	% Fixture	19.3	0.0	19.3
Street Side	Lumens	19962.1	0.0	19962.1
	% Fixture	80.7	0.0	80.7
Total	Lumens	24731.0	0.0	24731.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	340.3	1.4
10°-20°	854.5	3.5
20°-30°	1370.1	5.5
30°-40°	2266.2	9.2
40°-50°	3506.7	14.2
50°-60°	4694.4	19.0
60°-70°	6132.3	24.8
70°-80°	5009.0	20.3
80°-90°	557.5	2.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	24731.0	100.0
0°-180°	24731.0	100.0



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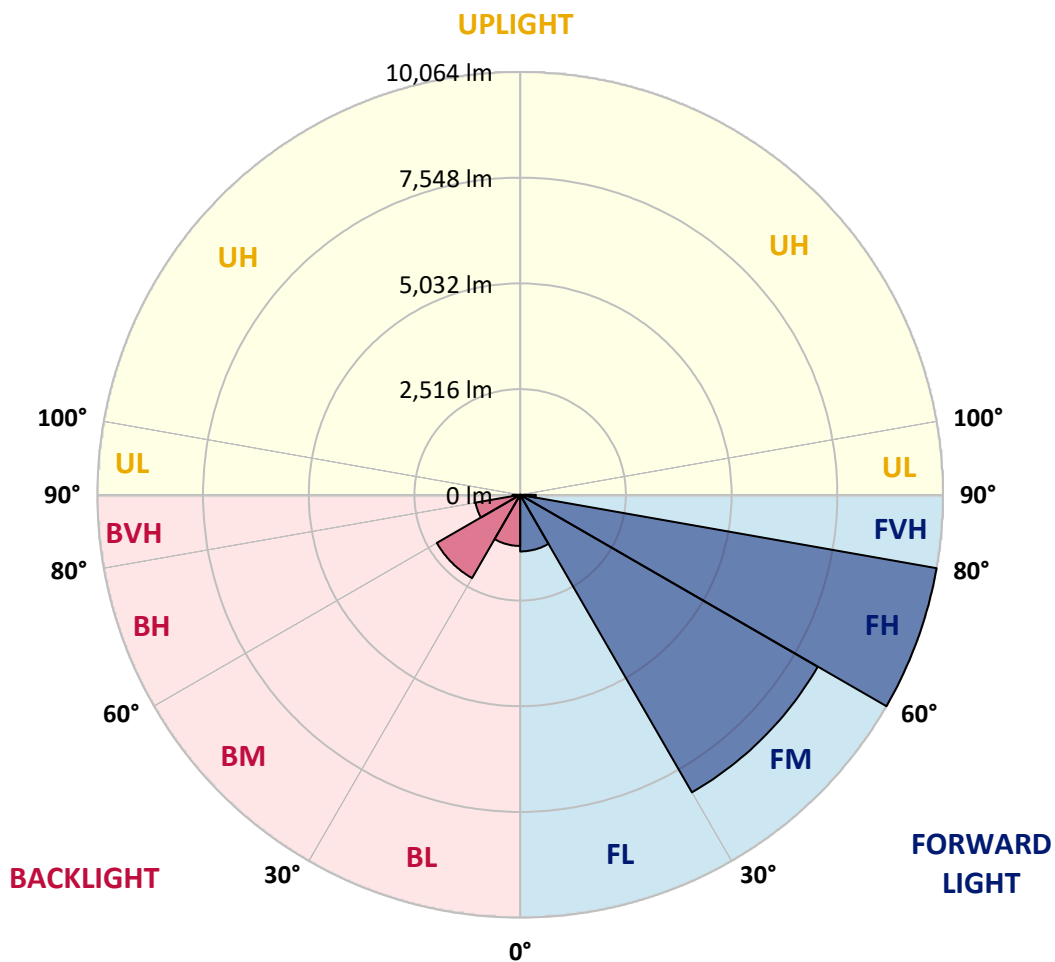
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1347.6	5.4			
FM	(30°-60°)	8176.9	33.1			
FH	(60°-80°)	10063.7	40.7			G4/12000
FVH	(80°-90°)	373.9	1.5			G3/500
BL	(0°-30°)	1217.3	4.9	B3/2500		
BM	(30°-60°)	2290.3	9.3	B2/2500		
BH	(60°-80°)	1077.7	4.4	B3/2500		G3/2500
BVH	(80°-90°)	183.6	0.7			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	3746.0	3746.0	3746.0	3746.0	3746.0	3746.0	3746.0	3746.0	3746.0	3746.0	3746.0
2.5°	3603.0	3612.5	3614.0	3625.0	3625.0	3623.5	3628.2	3647.0	3656.5	3678.5	3697.3
5°	3425.5	3436.5	3441.2	3460.0	3483.6	3485.2	3502.5	3538.6	3573.2	3621.9	3662.7
7.5°	3225.9	3238.5	3251.1	3290.3	3324.9	3328.1	3361.1	3419.2	3464.8	3524.5	3598.3
10°	3032.6	3035.8	3048.4	3098.6	3144.2	3148.9	3196.1	3262.1	3323.3	3406.6	3489.9
12.5°	2873.9	2883.4	2880.2	2917.9	2957.2	2960.4	3023.2	3106.5	3196.1	3290.3	3389.3
15°	2818.9	2817.4	2784.4	2782.8	2800.1	2803.2	2864.5	2961.9	3062.5	3178.8	3306.1
17.5°	2856.7	2844.1	2757.7	2704.2	2693.2	2696.4	2742.0	2848.8	2955.7	3089.2	3241.6
20°	3064.1	3015.4	2812.7	2683.8	2647.7	2647.7	2674.4	2760.8	2878.7	3034.2	3225.9
22.5°	3555.9	3480.5	3048.4	2818.9	2691.7	2679.1	2658.7	2724.7	2855.1	3042.1	3290.3
25°	4175.0	4138.9	3480.5	3178.8	2916.4	2875.5	2740.4	2764.0	2903.8	3126.9	3466.3
27.5°	4748.5	4685.7	4047.7	3702.0	3331.2	3268.3	2982.4	2886.5	3020.1	3284.1	3720.9
30°	5083.2	5040.8	4630.7	4300.7	3859.2	3779.0	3368.9	3128.5	3227.5	3543.3	4082.3
32.5°	5447.8	5422.6	5215.2	4915.1	4431.1	4338.4	3868.6	3522.9	3544.9	3887.4	4517.5
35°	5801.3	5834.3	5716.5	5496.5	5047.1	4960.7	4539.5	4038.3	3936.2	4274.0	4982.7
37.5°	6225.6	6233.4	6159.6	6016.6	5694.5	5623.8	5276.5	4588.3	4362.0	4685.7	5432.1
40°	7072.5	6948.4	6659.3	6546.1	6354.4	6310.4	5914.4	5092.6	4758.0	5108.4	5856.3
42.5°	7988.6	7795.3	7342.8	7157.4	7080.4	7039.5	6445.6	5428.9	5128.8	5531.0	6272.7
45°	8727.1	8570.0	8126.9	7897.5	7906.9	7840.9	6909.1	5729.0	5531.0	5955.3	6737.8
47.5°	9454.6	9192.2	8695.7	8662.7	8772.7	8675.3	7352.2	6029.2	5950.6	6417.3	7202.9
50°	9501.8	9262.9	9061.8	9325.8	9514.3	9393.4	7754.5	6422.0	6385.8	6976.7	7803.2
52.5°	8928.2	8893.7	9200.1	9644.8	9957.5	9849.0	8082.9	6825.8	6830.5	7675.9	8533.8
55°	8719.3	8675.3	9042.9	9589.8	10012.5	9948.0	8328.0	7281.5	7323.9	8524.4	9317.9
57.5°	9071.2	8961.2	9033.5	9486.1	9883.6	9845.9	8582.6	7787.5	7864.5	9501.8	10042.3
60°	10163.3	9938.6	9555.2	9640.0	9888.3	9866.3	8947.1	8351.6	8480.4	10520.0	10501.1
62.5°	11799.0	11544.5	10763.5	10386.4	10331.4	10289.0	9548.9	9044.5	9108.9	11255.4	10234.0
65°	13593.5	13320.1	12391.4	11773.9	11450.2	11359.1	10520.0	9880.5	9476.6	11253.8	9193.8
67.5°	15607.9	15318.8	14393.3	13804.0	13453.6	13298.1	12096.0	10556.1	9357.2	10301.6	7356.9
70°	17671.1	17396.1	16971.8	17177.7	17331.7	17094.4	14578.7	10780.8	8499.3	8076.6	4940.2
72.5°	16575.9	16553.9	16876.0	18827.6	21795.8	21842.9	17058.3	10146.0	6566.5	4800.4	2633.5
73°	15559.2	15651.9	16249.0	18584.0	22177.6	22193.3	17107.0	9817.6	6029.2	4135.7	2313.0
75°	8060.9	8689.4	10905.0	15069.0	20535.6	20609.4	15080.0	7432.3	3593.6	2297.3	1558.7
77.5°	2159.0	2130.7	3513.5	7341.2	13690.9	13593.5	9528.5	3598.3	1722.2	1440.9	1093.6
80°	740.1	749.5	1195.8	2685.4	6390.6	6618.4	4135.7	1569.7	1132.9	1004.1	774.7
82.5°	377.1	389.7	625.4	1142.3	2672.8	2616.2	1330.9	923.9	758.9	609.7	433.7
85°	201.1	207.4	344.1	592.4	980.5	991.5	468.3	493.4	482.4	345.7	213.7
87.5°	99.0	102.1	165.0	260.8	363.0	350.4	163.4	213.7	237.3	194.8	117.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3746.0	3746.0	3746.0	3746.0	3746.0	3746.0	3746.0	3746.0	3746.0	3746.0	3746.0
2.5°	3720.9	3720.9	3741.3	3775.9	3801.0	3824.6	3840.3	3865.4	3879.6	3878.0	3876.4
5°	3695.7	3711.5	3752.3	3794.7	3823.0	3841.9	3841.9	3852.9	3852.9	3848.2	3841.9
7.5°	3637.6	3664.3	3724.0	3761.7	3769.6	3749.2	3708.3	3676.9	3637.6	3617.2	3609.3
10°	3544.9	3579.5	3654.9	3672.2	3631.3	3559.0	3460.0	3375.2	3299.8	3265.2	3254.2
12.5°	3453.8	3499.3	3570.0	3543.3	3445.9	3304.5	3152.1	3035.8	2950.9	2917.9	2906.9
15°	3378.3	3433.3	3488.3	3405.1	3235.3	3038.9	2870.8	2762.4	2698.0	2672.8	2666.5
17.5°	3328.1	3392.5	3411.3	3255.8	3020.1	2800.1	2650.8	2580.1	2551.8	2540.8	2537.7
20°	3331.2	3403.5	3357.9	3111.2	2812.7	2591.1	2492.1	2471.7	2471.7	2471.7	2470.1
22.5°	3417.6	3480.5	3335.9	2976.1	2613.1	2415.1	2372.7	2390.0	2402.5	2402.5	2401.0
25°	3596.8	3631.3	3351.6	2845.7	2426.1	2262.7	2264.3	2297.3	2308.3	2308.3	2305.1
27.5°	3870.2	3841.9	3379.9	2701.1	2242.3	2124.4	2146.4	2176.3	2184.1	2179.4	2177.8
30°	4212.7	4099.6	3403.5	2531.4	2069.4	1995.6	2014.4	2031.7	2025.4	2014.4	2012.9
32.5°	4596.1	4362.0	3389.3	2341.3	1917.0	1862.0	1873.0	1882.4	1873.0	1846.3	1846.3
35°	4976.4	4599.3	3312.3	2133.9	1796.0	1733.2	1731.6	1761.4	1759.9	1728.5	1730.0
37.5°	5309.5	4786.2	3163.1	1943.7	1692.3	1638.9	1645.2	1664.0	1673.5	1631.0	1626.3
40°	5600.2	4915.1	2952.5	1781.9	1609.0	1612.2	1594.9	1565.0	1554.0	1535.2	1532.0
42.5°	5873.6	5004.7	2729.4	1646.7	1566.6	1602.7	1544.6	1473.9	1444.0	1461.3	1472.3
45°	6142.3	5105.2	2514.1	1535.2	1513.2	1574.5	1494.3	1415.8	1381.2	1389.0	1400.0
47.5°	6470.7	5245.1	2254.8	1415.8	1431.5	1522.6	1462.9	1378.0	1326.2	1294.8	1285.3
50°	6902.8	5447.8	1918.6	1286.9	1345.1	1466.0	1436.2	1323.1	1266.5	1203.6	1187.9
52.5°	7443.3	5639.5	1579.2	1183.2	1274.3	1417.3	1392.2	1275.9	1206.8	1131.4	1118.8
55°	7982.3	5666.2	1286.9	1093.6	1194.2	1351.3	1338.8	1238.2	1140.8	1079.5	1066.9
57.5°	8359.4	5413.2	1090.5	1018.2	1117.2	1269.6	1290.1	1192.6	1085.8	1038.6	1030.8
60°	8365.7	4808.2	971.1	967.9	1059.1	1198.9	1239.8	1139.2	1051.2	1019.8	1013.5
62.5°	7701.0	3874.9	894.1	930.2	1016.6	1140.8	1202.1	1109.4	1043.4	1030.8	1024.5
65°	6455.0	2862.9	832.8	895.7	977.4	1092.1	1170.6	1099.9	1040.2	1035.5	1030.8
67.5°	4765.8	1962.6	780.9	851.7	933.4	1041.8	1140.8	1085.8	1021.4	1040.2	1033.9
70°	2998.1	1310.5	732.2	801.4	875.2	983.6	1101.5	1060.6	997.8	986.8	966.4
72.5°	1692.3	947.5	674.1	736.9	799.8	906.7	1048.1	1018.2	944.4	900.4	879.9
73°	1528.9	897.2	660.0	721.2	782.5	890.9	1035.5	1005.6	928.7	879.9	861.1
75°	1118.8	733.8	595.5	656.8	710.2	818.7	975.8	942.8	859.5	801.4	788.8
77.5°	810.8	565.7	512.3	567.2	614.4	718.1	886.2	848.5	766.8	735.4	722.8
80°	584.5	429.0	424.3	477.7	518.5	623.8	790.4	751.1	672.5	765.2	744.8
82.5°	348.8	275.0	311.1	370.8	413.3	523.2	686.7	641.1	565.7	572.0	487.1
85°	166.6	155.6	193.3	243.6	273.4	358.3	572.0	535.8	452.5	370.8	363.0
87.5°	73.9	70.7	92.7	108.4	146.1	215.3	391.3	347.3	328.4	196.4	154.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)